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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,945	07/13/2000	Peng Jie Zhang	2925-0494P	3637

30594 7590 01/20/2006

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EXAMINER	
OPSASNICK, MICHAEL N	
ART UNIT	**PAPER NUMBER**
2655	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/615,945	ZHANG, PENG JIE	
	Examiner	Art Unit	
	Michael N. Opsasnick	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/27/05 and 11/23/05 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sewall et al (6708146) in view of Huang et al (6018706).

As per claims 1,11, Sewall et al (6708146) teaches and apparatus and method for discriminating voice band data in a network (abstract), comprising:

"calculating....input signal segment" as calculating a central second order moment (fig. 18, subblock 20; col. 8 lines 26-65) and an autocorrelation calculation representing a spectral characteristic (col. 8 line 56 – col. 9 line 15);

"determining.....value" as making a decision as to what class the signal belongs based upon both of these calculations (fig. 18m subblocks 26,36).

As per claims 1, 11, Sewall et al (6708146) teaches calculating an autocorrelation calculation, but not one that performs a periodicity parameter in an autocorrelation function; however, Huang et al (6018706) teaches a function that tracks the periodicity of a signal (Huang et al (6018706), col. 6 lines 11-25;col. 40-60), and performs a series of self similarity ratios (using a ratio of current pitch candidate versus a future frame pitch candidate – col. 17 lines 25-45) and choosing the corresponding peak (col. 17 line 57 – col. 18 line 9). Therefore, it would have been obvious to one of ordinary skill in the art of speech coding at the time the invention was made to modify the teachings of Sewall et al (6708146) with an autocorrelation periodicity function choosing peak values because it would advantageously provide a more accurate representation of the speech samples (col. 3 lines 35-45).

As per claims 2, 12, 21, the combination of Sewall et al (6708146) in view of Huang et al (6018706) teaches N samples (Sewall et al (6708146), col. 5 lines 15-20).

As per claims 3, 13, the combination of Sewall et al (6708146) in view of Huang et al (6018706) teaches calculating a ratio based upon delays, and comparing the ratio to a threshold (Huang et al (6018706), col. 18 lines 1-9) .

As per claims 4, 14, the combination of Sewall et al (6708146) in view of Huang et al (6018706) teaches calculating a second ratio based upon a second delay and comparing the thresholds (Sewall et al (6708146),col. 6 lines 44-67 -- examiner notes that different thresholds are calculated for each class listed in col. 6).

As per claims 5-7, 15-17, the combination of Sewall et al (6708146) in view of Huang et al (6018706) teaches multiple autocorrelation thresholds and comparison based upon the autocorrelation calculation (Sewall et al (6708146),col. 12 lines 15-58; col. 9 lines 15-25; col. 5 lines 43-55).

As per claims 8,18, the combination of Sewall et al (6708146) in view of Huang et al (6018706) teaches multiple classes to check thru (Sewall et al (6708146),col. 6 lines 10-22)

As per claims 9,19, the combination of Sewall et al (6708146) in view of Huang et al (6018706) teaches switching to the common class for the signal period if an anomalous classification occurs (Sewall et al (6708146),col. 11 lines 58-65).

As per claims 10,20, the combination of Sewall et al (6708146) in view of Huang et al (6018706) teaches using a power figure to switch between classes (Sewall et al (6708146),col. 8 line 61 – col. 9 line 15).

Response to Arguments

4. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young, can be reached at (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno
1/18/06

Michael N. Opsasnick
Examiner
Art Unit 2655